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REMARKS

Claims 1 (actually 2), 3, 5, and 6 were objected to based upon a typographical error. That error has been corrected in the respective claims as hereinabove amended.

Claims 2 and 3 have also been amended for clarification and new dependent method claims 9 and 10 have been added.

Claims 2 and 3 were rejected as directed to non-statutory subject matter. Each of those claims has been amended to more particularly point out and more distinctly claim the subject matter that the applicants regard as their invention. Specifically, the step of defining the longitudinal force to be transmitted by the chain and defining the associated longitudinal force lever arm to which the chain to be optimized is subjected has been added. Additionally, the initial plate geometry factors that are varied during calculation of bending moments have been added. With respect to the physical transformation that was said not to be required by the claims, the next-to-last step of each of those claims recites the physical transformation of an initial plate geometry that involves modifying plate geometry variables. And the useful, concrete, and tangible result of the method claims in each case is the plate geometry for which a minimum bending moment is achieved, for the longitudinal legs of the plate in claim 2 and for the vertical legs of the plate in claim 3. Thus, it is urged that claims 2 and 3 each recite statutory subject matter and are in allowable form, as are new dependent method claims 9 and 10.

Claims 5-8 were rejected as anticipated by the Turner '396 reference. The

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Turner reference does not disclose a chain plate in which the plate geometry is such as to provide a minimum bending moment within either the longitudinal legs or the vertical legs of the plate, as claimed in independent claims 5 and 6. Instead of providing a plate having minimized bending moments in the longitudinal or vertical legs, as claimed in claims 5 and 6, Turner teaches balancing the stresses and the moments in the inner and outer links of a chain (see, e.g., Turner, col. 2, lines 32-34) that includes both thin links and more robust, or stronger, links in order "to better load distribution among the links" (Turner, col. 7, line 59). The Turner reference is thus not directed to determining minimum bending moments in the longitudinal and vertical legs of a link plate, as claimed in the present application, but only to equalizing the loads carried by differently configured plates in a plate link chain that includes both thin plates and more robust plates.

In addition to being directed to a different chain structure, one involving a chain having both thin and more robust plates that are installed in a particular pattern within the chain, the Turner reference does not teach the relationship between plate geometric factors in order to achieve minimum bending moments within the longitudinal and vertical legs of a plate as claimed in independent claims 5 and 6. Nor does the Turner reference teach or suggest modifying plate geometric factors to achieve a plate that has minimal leg bending moments. The Turner reference is directed to balancing the loads assumed by plates positioned across the width of a chain, not to minimizing bending loads imposed on the legs of the plates of the chain. Moreover, the bending and bending moments

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discussed throughout the Turner reference are not plate leg bending moments, but are pin bending and pin bending moments, (see, Turner, col. 4, lines 44-47; col. 5, lines 17-19; col. 6, lines 27-29; and col. 7, lines 7-9). Therefore, the Turner reference, which relates to plates in which stresses and moments are equalized and not to plates having minimized leg bending moments, neither discloses nor even remotely suggests the invention as it is claimed in independent claims 5 and 6.

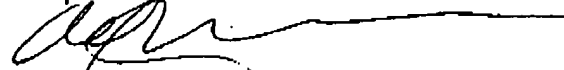
Claims 7 and 8 depend from amended claims 5 and 6, respectively. And in that regard the Turner reference does not disclose a factor k as recited in either of independent claims 5 and 6 of the present application.

Based upon the foregoing amendments and remarks, each of the claims in this application are clearly allowable in that they patentably distinguish over the Turner reference that was cited and relied upon by the examiner, whether that reference be considered in the context of 35 U.S.C. § 102 or of 35 U.S.C. § 103. Consequently, reconsideration and reexamination of the application is respectfully requested with a view toward the issuance of an early Notice of Allowance.

The examiner is cordially invited to telephone the undersigned attorney so that any question he might have can be quickly resolved in order that the present application can proceed toward allowance.

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Respectfully submitted,



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